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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,884	06/14/2006	Takashi Kikuchi	062404	6767

38834 7590 04/15/2009

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EXAMINER	
MAZUMDAR, SONYA	

ART UNIT	PAPER NUMBER
1791	

MAIL DATE	DELIVERY MODE
04/15/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/582,884	KIKUCHI ET AL.	
	Examiner	Art Unit	
	SONYA MAZUMDAR	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 9, 2009 has been entered.

Response to Arguments

2. Applicant's amendments, see page 5 in the remarks filed February 9, 2009 with respect to the rejection of claims 1-9 under 35 USC 112, 2nd paragraph, have been fully considered, and the rejection has been withdrawn.

3. Applicant's arguments with respect to claims 1-9 have been considered but, in light of amendments, are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 2, 3, 4, 5, and 9 are rejected under 35 U.S.C. 102(b) as being unpatentable by Hase et al. (JP2002-361744) in view of Dawes (US 4,008,352).

With respect to claims 1-3 and 9, Hase et al. teach making a laminate comprising a metallic foil (1) and a heat-resistant adhesive film (2), where the method comprises:

performing thermal lamination by passing the adhesive film and the metal foil between a first-stage set of metal rollers (4a) through a protective film;

slow-cooling the laminate by passing the laminate through a second-stage set of rollers (4b), set at a lower temperature than the laminating temperature;

separating the protective film from the laminate (abstract; paragraphs 0008 and 0010).

Hase et al. do not teach slowly cooling a laminate after thermal lamination using a slow-cooling roller only. However, it would have been obvious to do so, as Dawes teaches cooling a laminate by using a single water-cooled roller (3), along with other means, so the laminate is cooled sufficiently and maintain its' low peel strength, to enable the laminate to be passed on for the further processing of the film (column 2, lines 15-19 and 32-34; column 4, lines 40-49).

With respect to claim 4, Hase et al. teach performing the slow-cooling step by a 50°C difference between the laminating temperature (paragraphs 0009 and 0020).

With respect to claim 5, Hase et al. teach performing thermal lamination at 200°C, at least, thus the slow-cooling step would be performed at 150°C, at least, because of the required 50°C difference between the two steps (paragraphs 0005 and 0020).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hase et al. in view of Dawes, as applied to claim 1 above, and further in view of Nakano (US 5,165,990) and Kimura et al. (JP-06335978)

The teachings of claim 1 are as described above.

Although Hase et al. teach gradually cooling a laminate to a temperature near the glass transition temperature of the adhesive film to prevent wrinkles (paragraph 0008), Hase et al. in view of Dawes do not mention a specific cooling rate. However, as Nakano teaches, it would have been obvious to one having ordinary skill in the art to cool a laminate at a specific rate according to the conditions of the layers of the laminate between a press or pair of metal rollers (column 13, lines 43-45; column 18, lines 18-21). Kimura et al. further teach to cool according to the adhesive resin used, affecting the curvature and torsion of a laminate (paragraph 0013).

7. Claims 7, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hase et al. in view of Dawes, Nakano and Kimura et al.

With respect to claim 7, Hase et al. teach making a laminate comprising a metallic foil (1) and a heat-resistant adhesive film (2), where the method comprises:

performing thermal lamination by passing the adhesive film and the metal foil between a first-stage set of metal rollers (4a) through a protective film;

slow-cooling the laminate by passing the laminate through a second-stage set of rollers (4b), set at a lower temperature than the laminating temperature;

separating the protective film from the laminate (abstract; paragraphs 0008 and 0010).

Hase et al. do not teach slowly cooling a laminate after thermal lamination using a slow-cooling roller only. However, it would have been obvious to do so, as Dawes teaches cooling a laminate by using a single water-cooled roller (3), along with other means, so the laminate is cooled sufficiently and maintain its' low peel strength, to

enable the laminate to be passed on for the further processing of the film (column 2, lines 15-19 and 32-34; column 4, lines 40-49).

Although Hase et al. teach gradually cooling a laminate to a temperature near the glass transition temperature of the adhesive film to prevent wrinkles (paragraph 0008), Hase et al. do not mention a specific cooling rate. However, as Nakano teaches, it would have been obvious to one having ordinary skill in the art to cool a laminate at a specific rate according to the conditions of the layers of the laminate between a press or pair of metal rollers (column 13, lines 43-45; column 18, lines 18-21). Kimura et al. further teach to cool according to the adhesive resin used, affecting the curvature and torsion of a laminate (paragraph 0013).

With respect to claim 8, Hase et al. teach performing thermal lamination at 200°C, at least, thus the slow-cooling step would be performed at 150°C, at least, because of the required 50°C difference between the two steps (paragraphs 0005 and 0020).

With respect to claim 9, Hase et al. teach slow-cooling a laminate by passing the laminate through a second-stage set of rollers (4b), set at a lower temperature than the laminating temperature (abstract; paragraphs 0008 and 0010).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SONYA MAZUMDAR whose telephone number is (571)272-6019. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SM

/Philip C Tucker/
Supervisory Patent Examiner, Art Unit 1791